WHAT IS CLAIMED IS:

1. A method of controlling the damping of a prosthetic knee worn by an amputee, comprising:

   storing in a controller of said prosthetic knee a correlation relating sensory data and damping established in clinical investigations of individuals of varying size;

   measuring sensory information while said amputee is mobile or stationary and providing said sensory information to said controller; and

   adjusting the damping of said prosthetic knee to values derived by said controller using said correlation and said sensory information independently of prior knowledge of said amputee's size.

2. The method of Claim 1, wherein said correlation characterizes knee behavior during stance phase.

3. The method of Claim 1, wherein said controller has further stored therein biomechanical information.

4. The method of Claim 1, wherein measuring sensory information comprises measuring axial force.

5. The method of Claim 1, wherein measuring sensory information comprises measuring moment.

6. The method of Claim 1, wherein measuring sensory information comprises measuring knee angle.

7. The method of Claim 6, wherein said method further comprises differentiating knee angle measurements to calculate angular velocity of said prosthetic knee.

8. The method of Claim 1, wherein said method further comprises amplifying said sensory information.

9. The method of Claim 1, wherein said method further comprises monitoring moisture level local to said prosthetic knee.

10. The method of Claim 1, wherein said method further comprises automatically adjusting stance phase damping suitable for said amputee without requiring patient specific information to be pre-programmed in said prosthetic knee.

11. A method of controlling the damping of a prosthetic knee worn by an amputee, comprising:

storing in a controller of said prosthetic knee a correlation relating impact force of said amputee's prosthetic leg against an extension stop of said prosthetic knee and damping established in prior clinical investigations of individuals moving at varying speeds;

measuring said impact force as said amputee moves and providing measurements of said impact force to said controller; and

adjusting the damping of said prosthetic knee to values derived by said controller using said correlation and said measurements of said impact force to automatically control damping at substantially all speeds.

12. The method of Claim 11, wherein said method comprises measuring said impact force using sensors local to said prosthetic knee.

13. The method of Claim 11, wherein adjusting the damping of said prosthetic knee comprises controlling swing phase damping.

14. The method of Claim 11, wherein said method further comprises measuring knee angle.

15. The method of Claim 14, wherein said method further comprises modulating swing extension damping within a predetermined knee angle range.

16. The method of Claim 14, wherein said method further comprises modulating the knee angle range over which swing phase extension damping is applied.

17. The method of Claim 11, wherein said method further comprises measuring ground contact time of said amputee's prosthetic foot as said amputee moves at various speeds and said contact time being indicative of said amputee's speed.

18. The method of Claim 17, wherein said method further comprises storing said contact time within said controller in time slots corresponding to the speed of said amputee.

19. The method of Claim 18, wherein said method further comprises iteratively modulating the swing flexion damping to achieve a target peak flexion angle range until the swing flexion damping converges within each time slot.

20. The method of Claim 18, wherein said method further comprises iteratively modulating the swing extension damping to control the impact force of the extending prosthetic leg until swing extension damping converges within each time slot.

21. A controllable prosthetic knee for use by an amputee, comprising:

a knee actuator for providing controlled and variable knee damping;

one or more sensors for measuring sensory information while said amputee is mobile or stationary;

a controller adapted to communicate commands to said knee actuator and receive input from said sensors;

a memory within said controller and having stored therein a relationship between sensory data and damping established in clinical investigations of individuals of varying size;

whereby, said controller adjusts the damping of said knee actuator to values derived by said controller using said relationship and sensory information from said sensors without requiring patient specific information to be pre-programmed in said prosthetic knee.

22. The prosthetic knee of Claim 21, wherein said sensory data comprises axial force, moment and knee angle data.

23. The prosthetic knee of Claim 21, wherein said sensory data comprises impact force data of said amputee's prosthetic leg impacting a knee cap of said prosthetic knee.

24. The prosthetic knee of Claim 21, wherein said knee actuator comprises a magnetorheological actuator.

25. The prosthetic knee of Claim 24, wherein said magnetorheological actuator comprises a plurality of spaced plates with magnetorheological fluid therebetween.

26. The prosthetic knee of Claim 21, wherein said knee actuator comprises a viscous torque actuator.

27. The prosthetic knee of Claim 21, wherein said knee actuator comprises a pneumatic actuator.

28. The prosthetic knee of Claim 21, wherein said knee actuator comprises a dry friction actuator.

29. The prosthetic knee of Claim 21, wherein said memory has further stored therein biomechanical information to guide the modulation of damping.

30. The prosthetic knee of Claim 21, wherein said memory has further stored therein converged swing phase damping values for automatically controlling swing phase damping at various amputee locomotory speeds.